

## REMARKS

Reconsideration of this application, as amended, is respectfully requested.

Claims 1, 3-9 and 11 are pending. Claims 1, 3-9 and 11 have been rejected.

Claims 1, 7, and 9 have been amended. No claims have been canceled. No claims have been added. Support for the amendments is found in the specification, the drawings, and in the claims as originally filed. Applicants submit that the amendments do not add new matter.

Applicants reserve all rights with respect to the applicability of the Doctrine of Equivalents.

Claims 1, 3-9 and 11 have been rejected under 35 U.S.C. § 103(a) as being anticipated by U.S. Patent No. 6,785,704 to McCanne et al. (“McCanne.2”) in view of “Host Anycasting Service” to Partridge, et al. (“Partridge”).

Applicants reserve the right to swear behind McCanne.2.

Applicants respectfully submit that amended claim 1 is not obvious under 35 U.S.C. § 103(a) over McCanne.2 in view of Partridge.

Applicants have amended claim 1 to include determining whether the anycast address can be resolved into a real unicast address that is uniquely identified for the information object in the Internet; resolving the anycast address for the information object to the unicast address for the information object, if the corresponding anycast address can be resolved into the unicast address, wherein resolving the anycast address comprises sending an anycast resolution query to the anycast address according to an anycast address resolution protocol (AARP); returning a failure if the anycast address cannot be resolved into the unicast address; and obtaining a copy of the information object using the resolved unicast address.

It is respectfully submitted that neither McCanne.2, nor Partridge disclose such limitations of amended claim 1.

McCanne.2, in contrast, discloses a content distribution system for operation over an internetwork including content peering arrangements. More specifically, McCanne.2 discloses the following:

To overcome this problem, the typical redirection systems used by others that obfuscate the server address in this fashion recover the original intent of the Web naming system by embedding additional content-naming information into the path component of the URL. For example, a Web object conventionally referred to as `http://www.foo.com/index.html` could be referred to as follows with respect to the CDN:

`http://foo.cdn.acme.net/www.foo.com/index.html`

This representation then allows the ACME networks CDN redirection system to route client requests for this object to some arbitrary server in the CDN. Upon receiving the request that server would be able to pull the content from the origin server at `www.foo.com`. Of course, this approach can be generalized to embed arbitrary content routing and policy information in the referring URL.

(McCanne.2, col. 21, lines 1-15) (emphasis added)

In particular, McCanne.2 discloses:

The techniques above for client redirection refer to servers generically, but in a CDN, the servers typically act in concert with other elements in the network to bridge content from the publishing sites across the network to the CDN servers. As such, a more powerful model is to cast the servers as access points to an application-level content network as described in McCanne et al. I. In this model, the client requests are routed to service node attachment points based on server load measurements, network path characteristics, administrative locality, customer policies, and so forth. Content is routed across an application-level network of content routers. Additional layers of naming and addressing may be implemented to overlay this content network onto the underlying Internet.

(McCanne 2, col. 21, lines 52-65) (emphasis added)

Thus, McCanne.2 merely discloses redirecting the client requests to other service nodes.

In contrast, amended claim 1 refers to determining whether the anycast address can be resolved into a real unicast address that is uniquely identified for the information object in the Internet; resolving the anycast address for the information object to the unicast address for the information object, if the corresponding anycast address can be resolved into the unicast address; returning a failure if the anycast address cannot be resolved into the unicast address; and obtaining a copy of the information object using the resolved unicast address.

Partridge, in contrast, discloses host anycasting service. More specifically, Partridge discloses sending a query to an anycast address (page 2, paragraph 1 and page 3 paragraph 2), and fails to disclose determining whether the anycast address can be resolved into a real unicast address that is uniquely identified for the information object in the Internet; resolving the anycast address for the information object to the unicast address for the information object, if the corresponding anycast address can be resolved into the unicast address; returning a failure if the anycast address cannot be resolved into the unicast address; and obtaining a copy of the information object using the resolved unicast address, as recited in amended claim 1.

It is respectfully submitted that McCanne.2 does not teach or suggest a combination with Partridge, and Partridge does not teach or suggest a combination with McCanne.2. It would be impermissible hindsight, based on applicants' own disclosure, to incorporate the content distribution system of McCanne.2 into host anycasting service of Partridge. Furthermore, even if McCanne.2 and Partridge were combined, such a combination would lack determining whether the anycast address can be resolved into a real unicast address that is uniquely identified for the information object in the Internet; resolving the anycast address for the information object to the unicast address for the information object, if the corresponding anycast address can be resolved into the unicast address; returning a failure if the anycast address cannot be resolved into the unicast address; and obtaining a copy of the information object using the resolved unicast address, as recited in amended claim 1.

Given that amended claims 7 and 9 contain discussed limitations, applicants respectfully submit that amended claims 7 and 9 are not obvious under 35 U.S.C. § 103(a) over McCanne.2 in view of Partridge.

Because claims 3-6, 8, and 11-14 depend from amended claims 1, 7, and 9 respectively, applicants respectfully submit that amended claims 3-6, 8, and 11-14 are not obvious under 35 U.S.C. § 103(a) over McCanne.2 in view of Partridge.

Claims 1, 3-9 and 11 have been rejected under 35 U.S.C. § 103(a) as being anticipated by McCanne.2 in view of “Application-Layer Anycasting” to Bhattacharjee (“Bhattacharjee”). Applicants reserve the right to swear behind McCanne.2.

Applicants respectfully submit that amended claim 1 is not obvious under 35 U.S.C. § 103(a) over McCanne.2 in view of Bhattacharjee.

It is respectfully submitted that neither McCanne.2, nor Bhattacharjee discloses determining whether the anycast address can be resolved into a real unicast address that is uniquely identified for the information object in the Internet; resolving the anycast address for the information object to the unicast address for the information object, if the corresponding anycast address can be resolved into the unicast address; returning a failure if the anycast address cannot be resolved into the unicast address; and obtaining a copy of the information object using the resolved unicast address, as recited in amended claim 1.

As set forth above, McCanne.2, fails to disclose such limitations of amended claim 1.

Bhattacharjee, in contrast, merely discloses application-layer anycasting using anycast queries to resolve a list of IP addresses that form an anycast group (p.1391), and fails to disclose, determining whether the anycast address can be resolved into a real unicast address that is uniquely identified for the information object in the Internet; resolving the anycast address for the information object to the unicast address for the information object, if the corresponding anycast address can be resolved into the real unicast address; returning a failure if the anycast address cannot be resolved into the unicast address; and obtaining a copy of the information object using the resolved unicast address, as recited in amended claim 1.

It is respectfully submitted that McCanne.2 does not teach or suggest a combination with Bhattacharjee, and Bhattacharjee does not teach or suggest a combination with McCanne.2. It would be impermissible hindsight, based on applicants’ own disclosure, to incorporate the content distribution system of McCanne.2 into the application- layer anycasting of Bhattacharjee.

Furthermore, even if McCanne.2 and Bhattacharjee were combined, such a combination would lack determining whether the anycast address can be resolved into a real unicast address that is uniquely identified for the information object in the Internet; resolving the anycast address for the information object to the unicast address for the information object, if the corresponding anycast address can be resolved into the unicast address; returning a failure if the anycast address cannot be resolved into the unicast address; and obtaining a copy of the information object using the resolved unicast address, as recited in amended claim 1.

Given that amended claims 7 and 9 contain discussed limitations, applicants respectfully submit that amended claims 7 and 9 are not obvious under 35 U.S.C. § 103(a) over McCanne.2 in view of Bhattacharjee.

Because claims 3-6, 8, and 11-14 depend from amended claims 1, 7, and 9 respectively, applicants respectfully submit that amended claims 3-6, 8, and 11-14 are not obvious under 35 U.S.C. § 103(a) over McCanne.2 in view of Bhattacharjee.

Claims 1, 3-9, and 11-14 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,415,323 to McCanne (“McCanne”) in view of McCanne.2, further in view of Bhattacharjee. Applicants reserve the right to swear behind McCanne and McCanne.2.

Applicants respectfully submit that amended claim 1 is not obvious under 35 U.S.C. § 103(a) over McCanne, in view of McCanne.2, and further in view of Bhattacharjee.

It is respectfully submitted that neither McCanne, McCanne.2, nor Bhattacharjee discloses determining whether the anycast address can be resolved into a real unicast address that is uniquely identified for the information object in the Internet; resolving the anycast address for the information object to the unicast address for the information object, if the corresponding anycast address can be resolved into the unicast address; returning a failure if the anycast address

cannot be resolved into the unicast address; and obtaining a copy of the information object using the resolved unicast address, as recited in amended claim 1.

As set forth above, neither McCanne.2, nor Bhattacharjee discloses such limitations of amended claim 1.

McCanne, in fact, discloses a proximity-based redirection system. More specifically, McCanne discloses:

In an embodiment of the present invention, a novel scheme called stateful anycasting is employed. In this approach, the client uses anycast only as part of a redirection service, which by definition, is a short-lived ephemeral transaction. That is, the client contacts an anycast referral node via the anycast service, and the referral node redirects the client to a normally-addressed and routed (unicast) service node. Thus, the likelihood that the redirection process fails because the underlying anycast routes are indeterminate is low. If this does occur, the redirection process can be restarted, either by the client, or depending on context, by the new service node that has been contacted. If the redirection process is designed around a single request and single response, then the client can easily resolve any inconsistencies that arise from anycasting pathologies.

(McCanne, col. 10, lines 36-43)(emphasis added)

At this point, if the data is available and is of a transactional nature, then the ARN can either respond with the content directly or redirect the requesting client to a service node as follows:

The ARN selects a candidate service node S from its associated service cluster. The selection decision may be based on load and availability information that is maintained from a local monitoring protocol as described above.

The ARN performs an application-specific dialogue with S as necessary in preparation for the client C to attach to S. For example, in the case of live broadcast streaming media, the ARN might indicate the broadcast channel upon which S should tune in to via a request to the CBB overlay network. As part of this dialogue, S may return information to the ARN that is required to properly redirect C to S. Whether this information is present and the nature of that information is specific to the particular service requested.

The ARN responds to the original client request with a redirection message that refers the client C to the service node S selected above.

(McCanne, col. 16, lines 8-29)(emphasis added)

Thus, McCanne merely discloses redirecting the client to the service node. In contrast, amended claim 1 refers to determining whether the anycast address can be resolved into a real unicast address that is uniquely identified for the information object in the Internet; resolving the anycast address for the information object to the unicast address for the information object, if the corresponding anycast address can be resolved into the unicast address; returning a failure if the anycast address cannot be resolved into the unicast address; and obtaining a copy of the information object using the resolved unicast address.

It is respectfully submitted that neither of the references cited by the Examiner teaches or suggests a combination with each other. It would be impermissible hindsight, based on applicants' own disclosure, to combine the proximity-based redirection system McCanne and content distribution system of McCanne.2 into the application- layer anycasting of Bhattacharjee. Furthermore, even if McCanne, McCanne.2, and Bhattacharjee were combined, such a combination would still lack determining whether the anycast address can be resolved into a real unicast address that is uniquely identified for the information object in the Internet; resolving the anycast address for the information object to the unicast address for the information object, if the corresponding anycast address can be resolved into the unicast address; returning a failure if the anycast address cannot be resolved into the unicast address; and obtaining a copy of the information object using the resolved unicast address, as recited in amended claim 1.

Given that amended claims 7 and 9 contain discussed limitations, applicants respectfully submit that amended claims 7 and 9 are not obvious under 35 U.S.C. § 103(a) over McCanne, in view of McCanne.2, and further in view of Bhattacharjee.

Because claims 3-6, 8, and 11-14 depend from amended claims 1, 7, and 9 respectively, applicants respectfully submit that amended claims 3-6, 8, and 11-14 are not obvious under 35 U.S.C. § 103(a) over McCanne, in view of McCanne.2, and further in view of Bhattacharjee.

Claims 1, 3-9, and 11-14 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over McCanne in view of U.S. Patent No. 6,314,088 to Yamano et al. ("Yamano") in further view of Bhattacharjee. Applicants reserve the right to swear behind McCanne.

Applicants respectfully submit that amended claim 1 is not obvious under 35 U.S.C. § 103(a) over McCanne, in view of Yamano, and further in view of Bhattacharjee.

It is respectfully submitted that neither McCanne, Yamano, nor Bhattacharjee discloses determining whether the anycast address can be resolved into a real unicast address that is uniquely identified for the information object in the Internet; resolving the anycast address for the information object to the unicast address for the information object, if the corresponding anycast address can be resolved into the unicast address; returning a failure if the anycast address cannot be resolved into the unicast address; and obtaining a copy of the information object using the resolved unicast address, as recited in amended claim 1.

As set forth above, neither McCanne, nor Bhattacharjee discloses such limitations of amended claim 1.

Yamano, in fact, discloses a node configuration setup system. More specifically, Yamano discloses:

According to a second embodiment, if the default server 11 recognizes that there is no client configuration data on receiving an inquiry message M1 from client node 12, it obtains the ATM address of a second server 15 from the ATM name system server 18, establishes a connection 32 to it, and sends an inquiry message M2, asking whether it holds the client's configuration data. The second server responds with a reply message M3. If the reply message indicates that the client's data is in the second server, the default server sends a forward-transfer request message M4 to fetch the client's configuration data M5 from the second server and urges the client node 12 with a ready-to-accept message M6 to send a data request message M7 to the default server 11. In response, the default server 11 forwards the client's configuration data M8 to the client node 12. If the reply message M3 indicates that the client's configuration data is not available in the second server, the default server obtains the ATM address of another server for a further attempt, and the process will be repeated until the client data is located.

(Yamano, col. 5, line 63-col. 6, line 14)(emphasis added)



Thus, Yamano also fails to disclose determining whether the anycast address can be resolved into a real unicast address that is uniquely identified for the information object in the Internet; resolving the anycast address for the information object to the unicast address for the information object, if the corresponding anycast address can be resolved into the unicast address; returning a failure if the anycast address cannot be resolved into the unicast address; and obtaining a copy of the information object using the resolved unicast address, as recited in amended claim 1.

It is respectfully submitted that neither of the references cited by the Examiner teaches or suggests a combination with each other. It would be impermissible hindsight, based on applicants' own disclosure, to combine the proximity-based redirection system McCanne with the node configuration system of Yamano into the application- layer anycasting of Bhattacharjee.

Furthermore, even if McCanne, Yamano, and Bhattacharjee were combined, such a combination would still lack determining whether the anycast address can be resolved into a real unicast address that is uniquely identified for the information object in the Internet; resolving the anycast address for the information object to the unicast address for the information object, if the corresponding anycast address can be resolved into the unicast address; returning a failure if the anycast address cannot be resolved into the unicast address; and obtaining a copy of the information object using the resolved unicast address, as recited in amended claim 1.

Given that amended claims 7 and 9 contain discussed limitations, applicants respectfully submit that amended claims 7 and 9 are not obvious under 35 U.S.C. § 103(a) over McCanne, in view of Yamano, and further in view of Bhattacharjee.


Because claims 3-6, 8, and 11-14 depend from amended claims 1, 7, and 9 respectively, applicants respectfully submit that amended claims 3-6, 8, and 11-14 are not obvious under 35 U.S.C. § 103(a) over McCanne, in view of Yamano, and further in view of Bhattacharjee.

It is respectfully submitted that in view of the amendments and arguments set forth herein, the applicable rejections and objections have been overcome.

If there are any additional charges, please charge Deposit Account No. 02-2666.

Respectfully submitted,

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